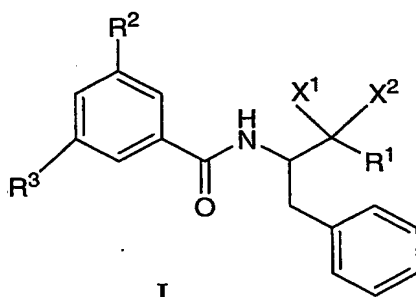


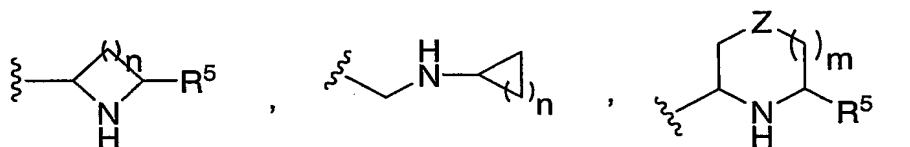
## WHAT IS CLAIMED IS:

1. A compound of the formula I:



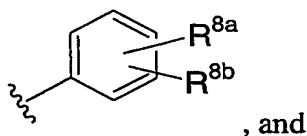
wherein:

R<sup>1</sup> is selected from the group consisting of:

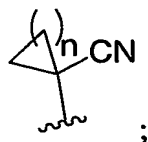


R<sup>2</sup> is selected from the group consisting of:

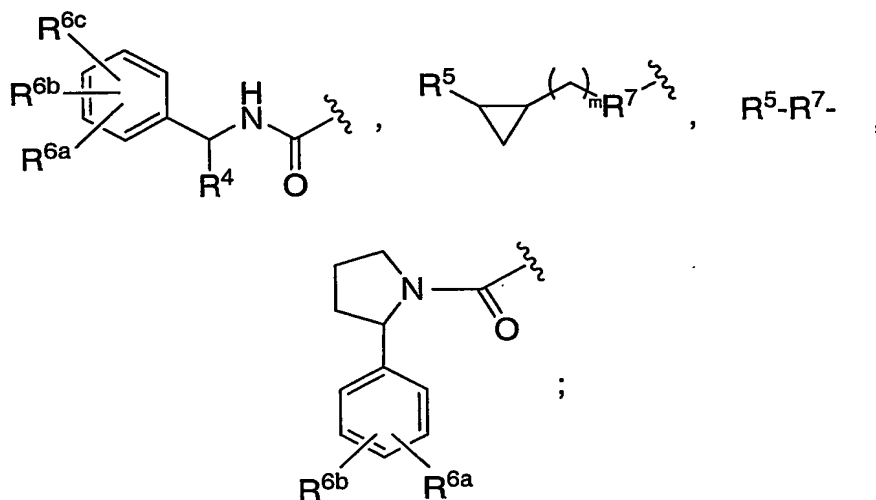
- (1) R<sup>4</sup>-S(O)<sub>m</sub>-NR<sup>5</sup>-,
- (2) R<sup>4</sup>-S(O)<sub>m</sub>-,
- (3) R<sup>4</sup>NHCO-,
- (4) R<sup>4</sup>CONH-,
- (5) R<sup>4</sup>R<sup>5</sup>N-,
- (6) nitrile,
- (7) NC- C<sub>1-6</sub>alkyl-,
- (8) halogen,
- (9)



(10)



R<sup>3</sup> is selected from the group consisting of:



5

R<sup>4</sup> is selected from the group consisting of:

- (1) hydrogen,
- (2) C<sub>1-6</sub>alkyl,
- (3) phenyl, and
- (4) benzyl;

10

R<sup>5</sup> is independently selected from the group consisting of:

- (1) hydrogen;
- (2) C<sub>1-6</sub>alkyl,
- (3) phenyl,
- (4) benzyl, and

15

R<sup>6a</sup>, R<sup>6b</sup>, and R<sup>6c</sup> are independently selected from the group consisting of:

- (1) hydrogen,

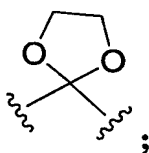
20

- (2) halogen,
- (3)  $-OR^5$ ,
- (4)  $-SR^5$ , and
- (5)  $C_{1-6}$ alkyl;

5

$R^7$  is selected from the group consisting of  $-C=C-$ , O, S, and NH;

Z is selected from the group consisting of CO, CH-OH, CH-F and



10  $R^{8a}$  and  $R^{8b}$  are independently selected from the group consisting of:

- (1) nitrile
- (2) hydrogen,
- (3) halogen,
- (4)  $-OR^5$ ,
- (5)  $-SR^5$ ,
- (6)  $C_{1-6}$ alkyl,
- (7)  $-CO_2R^5$ , and
- (8) tetrazolyl;

15

20  $X^1$  is hydrogen and  $X^2$  is hydroxyl, or  $X^1$  and  $X^2$  together form oxo;

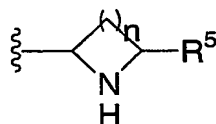
$n$  is independently 1, 2, 3, or 4;

$m$  is independently 0, 1, or 2;

and pharmaceutically acceptable salts thereof.

25

- 2. The compound of Claim 1 wherein  $X^1$  and  $X^2$  together form oxo.
- 3. The compound of Claim 1 wherein  $X^1$  is hydrogen and  $X^2$  is hydroxyl.
- 4. The compound of Claim 1 wherein  $R^1$  is:



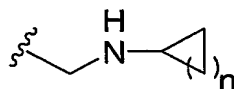
and wherein:

n is 2 or 3; and

R<sup>5</sup> is hydrogen or methyl;

5 and pharmaceutically acceptable salts thereof.

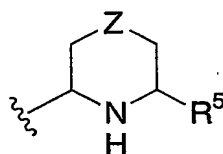
5. The compound of Claim 1 wherein R<sup>1</sup> is:



and wherein n is 1, and pharmaceutically acceptable salts thereof.

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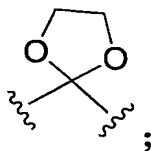
6. The compound of Claim 1 wherein R<sup>1</sup> is:



and wherein:

R<sup>5</sup> is hydrogen or methyl;

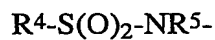
15 Z is selected from the group consisting of CO, CH-OH, and



and pharmaceutically acceptable salts thereof.

7. The compound of Claim 1 wherein R<sup>2</sup> is:

20



and wherein R<sup>4</sup> is selected from the group consisting of:

- (1) hydrogen,
- (2) C<sub>1-6</sub>alkyl,
- (3) phenyl, and
- (4) benzyl;

5

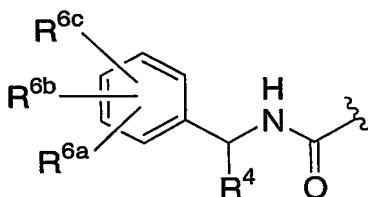
R<sup>5</sup> is selected from the group consisting of:

- (1) C<sub>1-6</sub>alkyl,
- (2) phenyl,
- (3) benzyl, and
- (4) hydrogen;

10

and pharmaceutically acceptable salts thereof.

8. The compound of Claim 1 wherein R<sup>3</sup> is:



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and wherein:

R<sup>4</sup> is methyl;

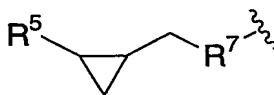
R<sup>6a</sup> is H or F;

R<sup>6b</sup> and R<sup>6c</sup> are hydrogen;

20

and pharmaceutically acceptable salts thereof.

9. The compound of Claim 1 wherein R<sup>3</sup> is:



25

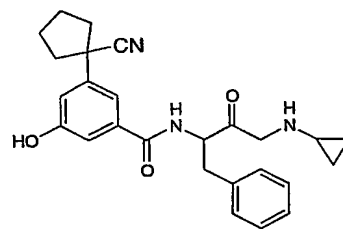
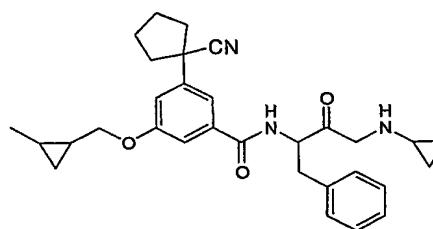
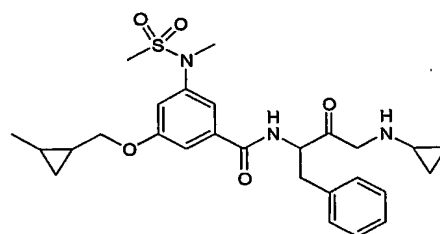
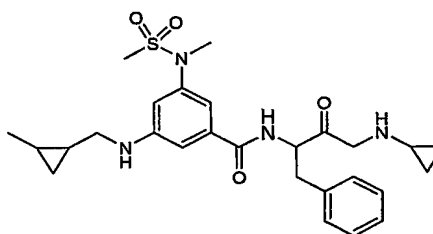
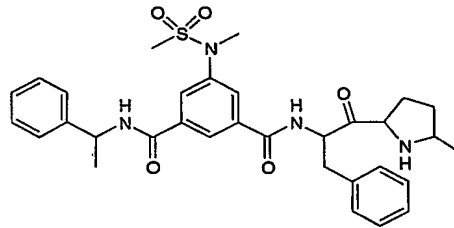
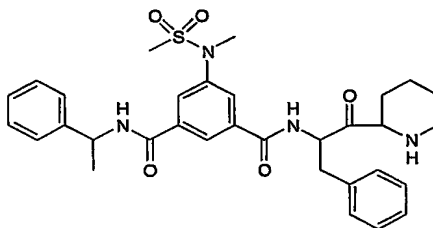
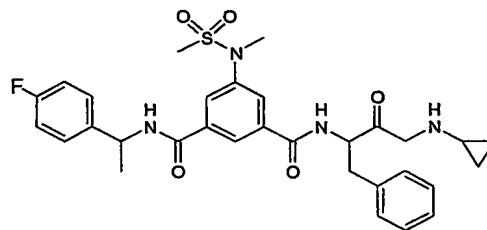
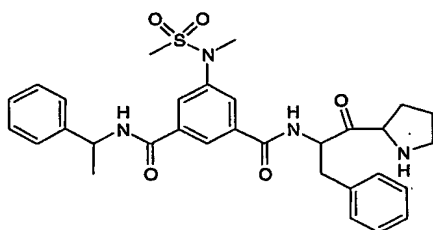
wherein:

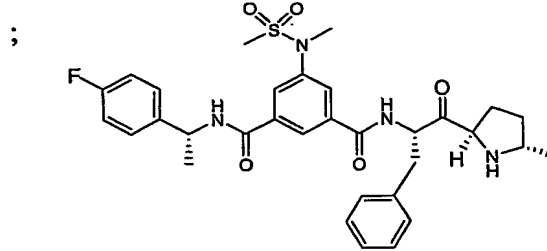
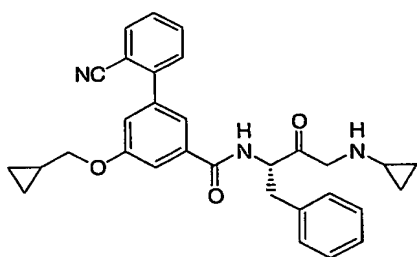
R<sup>5</sup> is methyl;

R<sup>7</sup> is O or NH;

and pharmaceutically acceptable salts thereof.

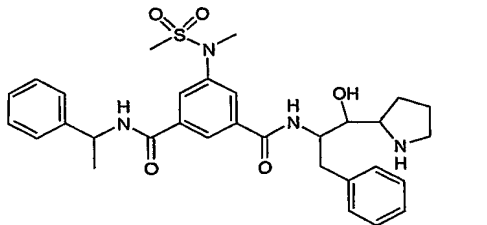
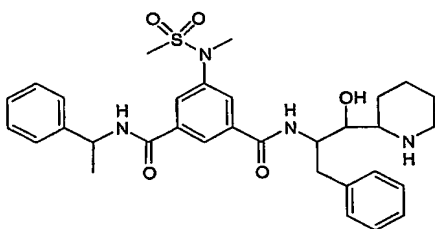
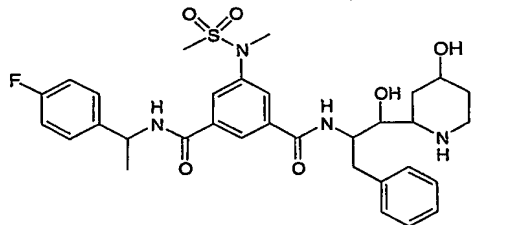
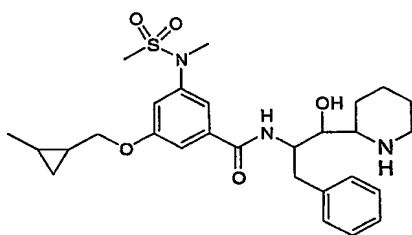
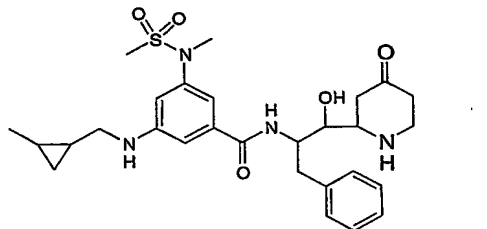
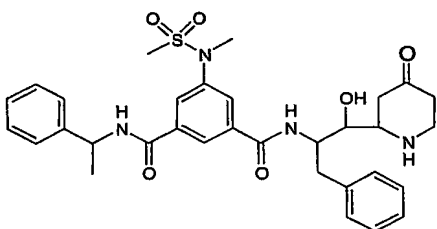
10. The compound of Claim 2 which is selected from the group consisting of:

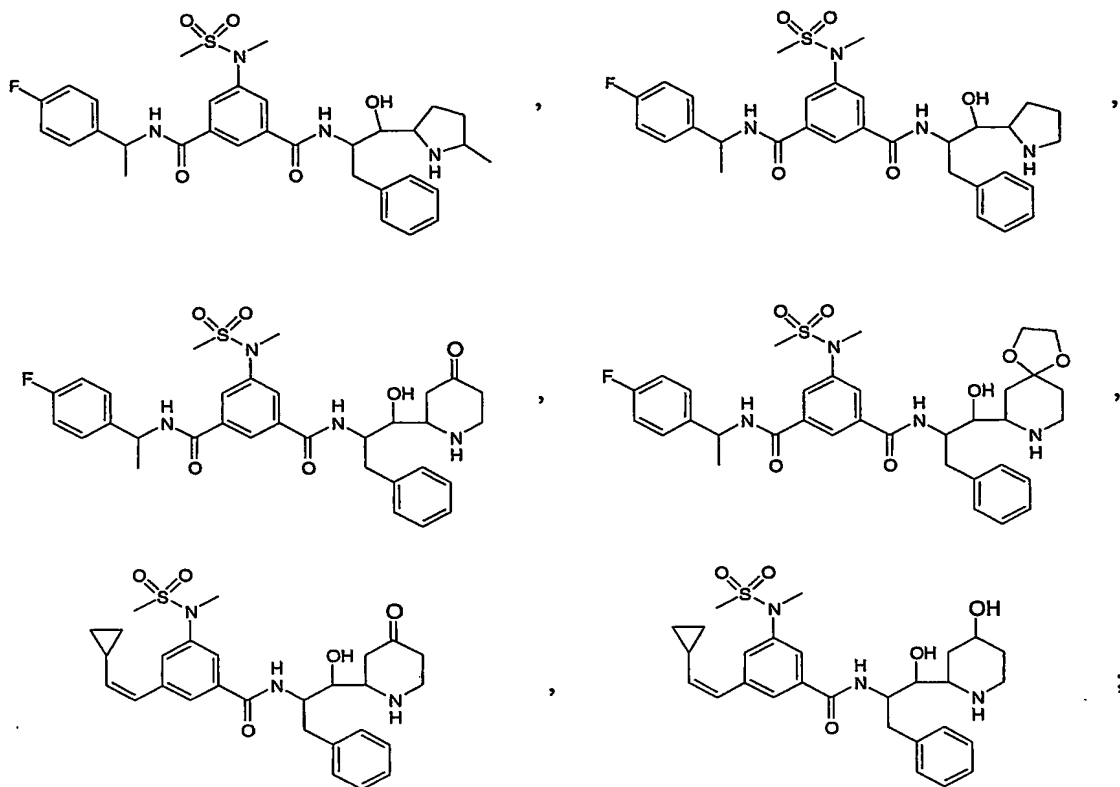




and pharmaceutically acceptable salts thereof.

11. The compound of Claim 3 which is selected from the group consisting of:





and pharmaceutically acceptable salts thereof.

12. A compound of Claim 1 in substantially diastereomerically pure form.

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13. A substantially diastereomerically pure compound of Claim 1 in substantially enantiomerically pure form.

14. A pharmaceutical composition comprising a therapeutically effective amount of a  
10 compound of Claim 1 and a pharmaceutically acceptable carrier.

15. A method for inhibition of  $\beta$ -secretase activity in a mammal which comprises administering to the mammal in need thereof a therapeutically effective amount of a compound of Claim 1.

15

16. A method for the manufacture of a medicament for inhibition of  $\beta$ -secretase activity in a mammal comprising combining a compound of Claim 1 with a pharmaceutical carrier or diluent.

5 17. A method for treating, preventing, controlling, ameliorating or reducing the risk of Alzheimers disease in a patient comprising the administration to the patient of a therapeutically effective amount of a compound of Claim 1.